5/15/42

ACE-166

INFORMATION SHEET ON DEHYDRATED CARROTS

The Dehydration Committee
U.S. Bureau of Agricultural Chemistry and Engineering
U. S. Department of Agriculture

FORM:

Carrots are dried in the form of slices, cut both crosswise and lengthwise, but the two forms should not be mixed; in cubes and strips. The crosswise slices are preferred to the lengthwise slices.

The dehydrated product must be prepared under modern sanitary conditions, in accordance with best commercial practice and Federal and State Pure Food Laws and Regulations.

VARIETIES:

Chantenay, Morse Bunching, and Imperator varieties have been found satisfactory. They should be well colored orange-red throughout, not over-mature and woody, nor so immature as to be pale in color.

PREPARATION:

The carrots should be thoroughly washed and peeled by any suitable means. If an abrasive peeler is used, sizing before peeling will reduce the waste. The material should not be peeled too deeply as the pro-vitamin A (carotene) is largely in the outer part of the root. After peeling, they are trimmed and crowned. Any green portion at the crown end must be completely removed.

The carrots should be cut as follows: slices from 3/16" to 4/16" thick; cubes, from 3/16" to 6/16" on a side; strips, not less than 3/4" in length, and in cross-section, not less than 3/16" or more than 6/16".

In no case shall the material be held more than thirty minutes prior to blanching.

PEELING AND TRIMMING LOSS:

Waste will run from 20 to 30%.

BLANCHING:

The cut pieces are blanched in flowing steam at not less than 190 °F. until translucent, usually about four minutes. Care must be taken that the steam reaches all pieces in order to prevent subsequent loss of caro-

tene. Water blanching or "series" blanching in water results in greater vitamin losses than where steam is used. Unblanched or under-blanched carrots when dehydrated have a chalky appearance and do not maintain their quality during storage.

TRAYING:

The material can be spread on the drying surface at the rate of about 1-1/4 pounds per square foot.

DRYING TEMPERATURES:

Finishing temperatures should not exceed 165° F.

MOISTURE CONTENT:

The moisture content of the finished product must not exceed 5% when packed ready for shipment.

YIELD:

The yield will be from 8 to 9% based on the fresh unprepared product.

VITAMIN CONTENT:

Properly handled freshly dug carrots will produce freshly dehydrated material having approximately 90 milligrams of pro-vitamin A (carotent) per 100 grams; 300 micrograms of vitamin B_1 (thiamin) per 100 grams; 300 micrograms of vitamin B_2 (riboflavin) per 100 grams; 20 milligrams of vitamin C (ascorbic acid) per 100 grams.

Owing to variations in the raw stock and uncertainty of vitamin retention, no guarantee of the vitamin content of the products should be given.

Detailed specifications covering purchases are issued by the Office of the Quartermaster General of the U.S. Army and the Agricultural Marketing Administration of Washington, D. C.

If further detailed information is desired, inquiries should be addressed to

The Dehydration Committee
Bureau of Agricultural Chemistry and Engineering
U.S. Department of Agriculture
Washington, D.C.

or to

The Dehydration Committee
Bureau of Agricultural Chemistry and Engineering
U.S. Department of Agriculture
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